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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/126,897	07/31/1998	JEAN-PIERRE WEBER	003250-198	9422

21839 7590 10/20/2003

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

BURD, KEVIN MICHAEL

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 10/20/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/126,897

Applicant(s)

WEBER ET AL.

Examiner

Kevin M Burd

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. This office action, in response to the amendment filed 8/7/2003, is a non-final office action.

Response to Arguments

2. Applicant's arguments with respect to claims 28-45 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 28-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakib et al (US 5,966,376) in view of Fukasawa et al (US 5,533,012).

Regarding claims 28, 30 and 32, Rakib discloses a method of transmitting data over optical fiber (abstract). A signal is spread (figure 19, element 408) and then modulated (element 410) before being converted for transmission over optical fiber (column 9, lines 33-38). The process is inverted in the receiver to recover the originally transmitted signal (figure 19).

Rakib does not disclose the step of adding a control signal to the modulated signal. However, adding such control signals is well known in the art. Fukasawa

discloses adding a control signal to the modulated signal to allow downstream demodulators to estimate the carrier phase from this control signal (column 19, lines 48-54). This allows the signal to be despread with less errors than without the control signal. For this reason, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the teachings of Fukasawa into the method of Rakib.

Regarding claims 29 and 31, Rakib discloses the spread signal is low pass filtered prior to modulation (figure 24).

Regarding claim 33, the signal prior to spreading and modulation is a baseband subscriber data signal (column 7, lines 55-66).

Regarding claim 34, the signals are modulated using TDMA (column 7, line 66 to column 8, line 9).

Regarding claim 35, the signals are modulated by CDMA (figure 19).

Regarding claims 36, 38, 40, 41 and 43-45, Rakib discloses an apparatus for transmitting data over optical fiber (abstract). A signal is spread (figure 19, element 408) and then modulated (element 410) before being converted for transmission over optical fiber (column 9, lines 33-38). The process is inverted in the receiver to recover the originally transmitted signal (figure 19).

Rakib does not disclose the step of adding a control signal to the modulated signal. However, adding such control signals is well known in the art. Fukasawa discloses adding a control signal to the modulated signal to allow downstream demodulators to estimate the carrier phase from this control signal (column 19, lines 48-

54). This allows the signal to be despread with less errors than without the control signal. For this reason, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the teachings of Fukasawa into the apparatus for Rakib. The frequencies of both signals will be in the RF range and certain frequencies from one range will be larger than certain frequencies of the second range.

Regarding claim 37, the frequencies are in the radio frequency range.

Regarding claims 39 and 42, Rakib discloses the spread signal is low pass filtered prior to modulation (figure 24).

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry or for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM - 6:00 PM.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.


Kevin M. Burd
PATENT EXAMINER
10/10/03